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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,660	12/21/2001	James H. Aubert	SD6675/S95493	3736

7590 10/29/2003

Sandia National Laboratories
Patent & Licensing Division
MS-0161
P.O. Box 5800
Albuquerque, NM 87185-0161

EXAMINER

LOVERING, RICHARD D

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,660

Applicant(s)

AUBERT

Examiner

LOVERING

Group Art Unit

1712

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on DEC 21, 2001
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-19 is/are pending in the application.
- Of the above claim(s) 8-19 is/are withdrawn from consideration.
- ☒ Claim(s) 1-6 is/are allowed.
- ☒ Claim(s) 7 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☒ Claim(s) 1-19 are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The drawing(s) filed on DEC 21, 2001 is/are objected to by the Examiner.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2
- ☒ Notice of Reference(s) Cited, PTO-892
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-7, drawn to a method of making a thermally removable adhesive, classified in Class 528, subclass 393.

II. Claims 8-13, drawn to a method of adhering two pieces together, classified in Class 156, subclass 327. Independent claim 8 of this group recites contacting the thermally removable adhesive to the surface of a first piece, heating to a temperature greater than approximately 90°C, contacting the surface of a second piece to the thermally removable adhesive to form a two piece system and curing the two piece system by cooling to less than approximately 70°C to adhere the first piece to the second piece, but does not recite diluting the homogeneous mixture with a solvent and applying the diluted homogeneous mixture to a surface at a temperature less than approximately 70°C to simultaneously cure and evaporate at least a portion of the solvent to form a thermally removable conformal coating.

III. Claims 14-19, drawn to a method to form a conformal solution, classified in Class 427, subclass 372.2. Independent claim 14 of this group recites diluting the homogeneous mixture with a solvent and applying the diluted homogeneous mixture to a surface at a temperature less than

approximately 70°C to simultaneously cure and evaporate at least a portion of the solvent to form a thermally removable conformal coating but does not recite contacting the thermally removable adhesive to the surface of a first piece, heating to a temperature greater than approximately 90°C, contacting the surface of a second piece to the thermally removable adhesive to form a two piece system and curing the two piece system to less than approximately 70°C to adhere the first piece to the second piece.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require simultaneously initiating a Diels-Alder reaction between furan and bismaleimide and an epoxy reaction between curative and oxirane. The subcombination has separate utility such as in use in forming a destructible mandrel

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for composite manufacture instead of a method of adhering two pieces together.

Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require simultaneously initiating a Diels-Alder reaction between furan and bismaleimide and an epoxy reaction between curative and oxirane. The subcombination has separate utility such as using the thermally removable adhesive as a coating without diluting it.

Groups II and III are directed to distinct methods whereby patentability is based on different combinations of features recited in the independent claims as noted above.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classifications, restriction for examination purposes as indicated is proper.

During a telephone conversation with Elmer Klavetter on October 14, 2003 a provisional election was made without traverse

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to prosecute the invention of Group I, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention^s_A

2. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 is indefinite, inaccurate and misleading in reciting the step of heating the product to a temperature > ca. 100°C, because this step is not part of the method of making a thermally-removable adhesive, but instead said step breaks the adhesive bond. (See specification page 4, lines 20-22.)

4. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record doesn't disclose or fairly suggest the method of making a thermally removable adhesive of claims 1-6 herein.

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5. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the two cylinders adhered using the claimed adhesive, etc., referred to in the specification: Page 4, lines 8 and 9; page 8, line 16 - page 9, line 15; and page 12, lines 6-19 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Correction is required.

6. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing. Applicant should furnish a drawing illustrating the subject matter referred to in the preceding paragraph.

7. The specification is objected to for referring to Fig. 5 (page 4, lines 8 and 9) when there is no such Figure now in the case.

8. The references listed on the attached Form PTO-1449 and PTO-892 show the state of the art.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lovering whose telephone number is (703) 308-0443. The examiner can normally be reached on Mon.-Fri. from 7:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached on (703) 308-2340. The fax phone number for this Group is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

R. Lovering:cdc
October 23, 2003

Richard D. Lovering
RICHARD D. LOVERING
PRIMARY EXAMINER
GROUP ~~1200~~ 1700